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LOCUS
            AA082927
                                      230 bp
                                                mRNA
                                                        linear
                                                                 EST 23-DEC-1997
            zn07f11.sl Stratagene hNT neuron (#937233) Homo sapiens cDNA clone
DEFINITION
            IMAGE:546765 3' similar to TR:G435776 G435776 RETINOBLASTOMA
            BINDING PROTEIN 1. ;, mRNA sequence.
ACCESSION
            AA082927
            AA082927.1 GI:1625043
VERSION
KEYWORDS
            EST.
SOURCE
            human.
  ORGANISM
            Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
               (bases 1 to 230)
  AUTHORS
            Hillier, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B.,
            Chissoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins
            ,M., Hultman,M., Kucaba,T., Lacy,M., Le,M., Le,N., Mardis,E., Moore
            ,B., Morris,M., Parsons,J., Prange,C., Rifkin,L., Rohlfing,T.,
            Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E.,
            Underwood, K., Wohldmann, P., Waterston, R., Wilson, R. and Marra, M.
  TITLE
            Generation and analysis of 280,000 human expressed sequence tags
  JOURNAL
            Genome Res. 6 (9), 807-828 (1996)
  MEDLINE
            97044478
COMMENT
            Contact: Wilson RK
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            WARNING: There is evidence that suggests that the 384-well parent
            plate of this clone contains both human and mouse derived clones.
            Thus, the origin of this clone is uncertain. This caution should be
            kept in mind should you use this clone.
            This clone is available royalty-free through LLNL; contact the
           IMAGE Consortium (info@image.llnl.gov) for further information.
            Possible reversed clone: similarity on wrong strand
            Insert Length: 1394
                                  Std Error: 0.00
            Seg primer: -40M13 fwd. from Amersham.
FEATURES
                     Location/Qualifiers
     source
                     1..230
                     /organism="Homo sapiens"
                     /db xref="GDB: 3924955"
                     /db xref="taxon:9606"
                     /clone="IMAGE:546765"
                     /clone lib="Stratagene hNT neuron (#937233)"
                     /dev stage="hNT neurons"
                     /lab_host="SOLR (kanamycin resistant)"
                     /note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2:
                     XhoI; Cloned unidirectionally. Primer: Oligo dT.
                     Differentiated, post mitotic hNT neurons. Average insert
                     size: 1.5 kb; Uni-ZAP XR Vector; ~5' adaptor sequence: 5'
                     GAATTCGGCACGAG 3' ~3' adaptor sequence: 5'
                     CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT
                100 a
                          39 c
                                   42 g
                                            49 t
ORIGIN
       1 cttggtgcat tactgcggat ggaatgtgag atacgatgaa tggattaaag cagataaaat
     61 agtaagacct gctgataaaa atgtgccaaa gataaaacat cggaagaaaa taaagaataa
     121 attagacaaa gaaaaagaca aagatgaaaa atactctcca aaaaactgta aacttcggcg
    181 cttgtccaaa ccaccatttc agacaaatcc atctcctgaa atggtatcca
//
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```
LOCUS
             AA167428
                                       514 bp
                                                 mRNA
                                                          linear
                                                                   EST 09-MAR-1998
DEFINITION
             zp08d12.sl Stratagene ovarian cancer (#937219) Homo sapiens cDNA
             clone IMAGE:595799 3', mRNA sequence.
ACCESSION
             AA167428
VERSION
            AA167428.1 GI:1745815
KEYWORDS
             EST.
SOURCE
            human.
  ORGANISM
             Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
                (bases 1 to 514)
            Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S.,
  AUTHORS
            Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin
,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B.,
            White, Y., Wylie, T., Waterston, R. and Wilson, R.
            WashU-NCI human EST Project
  TITLE
  JOURNAL
            Unpublished (1997)
COMMENT
            Contact: Wilson RK
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            This clone is available royalty-free through LLNL; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            Insert Length: 1180
                                   Std Error: 0.00
            Seq primer: -40M13 fwd. from Amersham
            High quality sequence stop: 209.
FEATURES
                     Location/Qualifiers
                      1..514
     source
                      /organism="Homo sapiens"
                      /db xref="taxon:9606"
                      /clone="IMAGE:595799"
                      /clone_lib="Stratagene ovarian cancer (#937219)"
                      /sex="female"
                      /dev_stage="adult, 64 years"
                      /lab host="SOLR (kanamycin resistant)"
                      /note="Vector: Bluescript SK-; Site_1: EcoRI; Site_2: XhoI
                      ; Cloned unidirectionally. Primer: Oligo dT. Papillary
                     serous carcinoma, isolated from ascites, 64 year old
                     caucasian. Average insert size: 0.8 kb; Uni-ZAP XR Vector;
                      ~5' adaptor sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor
                     sequence: 5' CTCGAGTTTTTTTTTTTTTTT 3'"
BASE COUNT
                183 a
                          103 c
                                    72 g
                                             152 t
                                                        4 others
ORIGIN
         tttcacaaac tatggcattt tatttcagag cctttgctta catttgtaca atatattaca
      61
         taattettea tigitigeag ateetaatat ataetttata gettttatte tataagettt
     121 tttcttcaac attttgctgt caacaaatct ttacagtcct gtacaaattt gaataacttg
     181 aaaccatttt caacaaaatt agttactgta agcacacact acaagactga aaatgctttt
     241 cttagaaaag ttgaatgtaa aggattctga cacgttagca tctacaacaa aacgcattga
     301
          aattcccacg tcgtattgcc aggaaacaaa gaaaacatgc cagccccatc caaaaaaagt
     361
          acacagaact acaattaaaa cagtaaaaca gtctgtacca taaagtactg nggattaaca
     421
          gtggccagat atttaaatag cctggatgna cacatccnca atataccaat ggtcttacca
          aggnggaagg atttaatacc agtggcccaa ccgg
//
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```
LOCUS
            AA169631
                                      240 bp
                                                         linear
                                                mRNA
                                                                  EST 09-MAR-1998
DEFINITION
            zo94h03.sl Stratagene ovarian cancer (#937219) Homo sapiens cDNA
            clone IMAGE: 594581 3', mRNA sequence.
ACCESSION
            AA169631
            AA169631.1 GI:1748261
VERSION
KEYWORDS
            EST.
SOURCE
            human.
  ORGANISM
            Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
               (bases 1 to 240)
  AUTHORS
            Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S.,
            Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin
            ,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B.,
            White, Y., Wylie, T., Waterston, R. and Wilson, R. WashU-NCI human EST Project
  TITLE
            Unpublished (1997)
  JOURNAL
            Contact: Wilson RK
COMMENT
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            This clone is available royalty-free through LLNL; contact the
            IMAGE Consortium (info@image.llnl.gov) for further information.
            Insert Length: 1626 Std Error: 0.00
            Seq primer: -40M13 fwd. from Amersham
            High quality sequence stop: 177.
FEATURES
                     Location/Qualifiers
                      1..240
     source
                     /organism="Homo sapiens"
                     /db xref="taxon:9606"
                     /clone="IMAGE:594581"
                     /clone_lib="Stratagene ovarian cancer (#937219)"
                     /sex="female"
                     /dev_stage="adult, 64 years"
                     /lab host="SOLR (kanamycin resistant)"
                     /note="Vector: Bluescript SK-; Site_1: EcoRI; Site_2: XhoI
                     ; Cloned unidirectionally. Primer: Oligo dT. Papillary
                     serous carcinoma, isolated from ascites, 64 year old
                     caucasian. Average insert size: 0.8 kb; Uni-ZAP XR Vector;
                     ~5' adaptor sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor
                     sequence: 5' CTCGAGTTTTTTTTTTTTTT 3'"
BASE COUNT
                 41 a
                          66 c
                                    45 g
                                             87 t
                                                       1 others
ORIGIN
       1 gttgtttacc actgttgctt tatggcttct tttctgcttt tttgatgaac ttcctcctcc
      61 ctgagcatct ttcactcttt tctgacctgt acaggctttt tcaggatgtt ctggttctgg
     121 ctgattacta ctgcttgagc tcacactggc atcaaaacct gctggcgagc tattcccttc
     181 agactggagg tcttggagct ccccagcaac actatccacc tcaattgtgc tancagtttc
//
```

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```
LOCUS
            AA830588
                                              mRNA
                                     491 bp
                                                      linear
                                                                EST 07-APR-1998
DEFINITION
            oc55c05.s1 NCI CGAP GCB1 Homo sapiens cDNA clone IMAGE:1353608 3'
            similar to gb: S66427 RETINOBLASTOMA BINDING PROTEIN 1 (HUMAN);
            mRNA sequence.
ACCESSION
            AA830588
VERSION
            AA830588.1 GI:2903687
KEYWORDS
            EST.
SOURCE
            human.
            Homo sapiens
  ORGANISM
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
               (bases 1 to 491)
            NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  AUTHORS
  TITLE
            National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL
            Unpublished (1997)
            Contact: Robert Strausberg, Ph.D.
COMMENT
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D., David Allman,
            Ph.D., Gerald Marti, M.D.
             cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
            Bonaldo, Ph.D.
             cDNA Library Arrayed by: Greg Lennon, Ph.D.
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
           www-bio.llnl.gov/bbrp/image/image.html
           Insert Length: 1560
                                 Std Error: 0.00
           Seq primer: -40ml3 fwd. ET from Amersham
           High quality sequence stop: 387.
FEATURES
                    Location/Qualifiers
     source
                     1..491
                     /organism="Homo sapiens"
                     /db xref="taxon:9606"
                     /clone="IMAGE:1353608"
                     /clone_lib="NCI_CGAP_GCB1"
                     /tissue type="germinal center B cell"
                    /lab host="DH10B"
                    /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                    polylinker; Site_1: Not I; Site 2: Eco RI; 1st strand cDNA
                    was prepared from human tonsillar cells enriched for
                    germinal center B cells by flow sorting (CD20+, IgD-),
                    provided by Dr. Louis M. Staudt (NCI), Dr. David Allman
                    (NCI) and Dr. Gerald Marti (CBER). cDNA synthesis was
                    primed with a Not I - oligo(dT) primer
                    ]. Double-stranded cDNA was ligated to Eco RI adaptors
                    (Pharmacia), digested with Not I and cloned into the Not I
                    and Eco RI sites of the modified pT7T3 vector. Library
                    went through one round of normalization, and was
                    constructed by Bento Soares and M. Fatima Bonaldo."
BASE COUNT
               136 a
                        100 c
                                 143 g
                                          112 t
ORIGIN
         accegeegee ettetteeee ateteteeee egggeetget ggttttgggg gggagaagga
     61
         gagagggac tctggacgtg ccagggtcag atctcgcctc cgaggaaggt gcagctgaac
    121
        ctggtgtttt agaggatacc ttggtcccag agtcatcatg aaggcccttg atgagcctcc
    181 ctatttgaca gtgggcactg atgtgagtgc taaatacaga ggagcctttt gtgaagccaa
    241 gatcaagaca gcaaaaagac ttgtcaaagt caaggtgaca tttagacatg attcttcaac
    301 agtggaagtt caggatgacc acataaaggg cccactaaag gtaggagcta ttgtggaagt
    361 gaagaatatt gatggtgcat atcaggaagc tgttatcaat acactaacag atgcgagttg
```

421 gtacactgta gtgtttgatg acggagatga gaagacactg agacgatggt cactgtgcat 481 gaaaggagag a

481 gaaaggagag

● link ● save

```
448 bp
            AA772654
                                               mRNA
                                                       linear
                                                                EST 31-DEC-1998
LOCUS
           ai53c03.sl Soares parathyroid tumor NbHPA Homo sapiens cDNA clone
DEFINITION
            1360708 3' similar to qb:S66427 RETINOBLASTOMA BINDING PROTEIN 1
            (HUMAN);, mRNA sequence.
            AA772654
ACCESSION
            AA772654.1 GI:2824437
VERSION
KEYWORDS
            EST.
            human.
SOURCE
            Homo sapiens
  ORGANISM
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
               (bases 1 to 448)
           NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  AUTHORS
            National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
  TITLE
            Tumor Gene Index
  JOURNAL
            Unpublished (1997)
COMMENT
            Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo
            , Ph.D.
             cDNA Library Arrayed by: Greg Lennon, Ph.D.
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            www-bio.llnl.gov/bbrp/image/image.html
            Insert Length: 616 Std Error: 0.00
            Seq primer: -40ml3 fwd. ET from Amersham
           High quality sequence stop: 374.
FEATURES
                     Location/Qualifiers
                     1..448
     source
                     /organism="Homo sapiens"
                     /db xref="taxon:9606"
                     /clone="1360708"
                     /clone_lib="Soares_parathyroid_tumor_NbHPA"
                     /tissue type="parathyroid tumor"
                     /dev stage="adult"
                     /lab_host="DH10B (ampicillin resistant)"
                     /note="Organ: parathyroid gland; Vector: pT7T3D (Pharmacia
                     ) with a modified polylinker; Site_1: Not I; Site 2: Eco
                     RI; 1st strand cDNA was primed with a Not I - oligo(dT)
                     TTTTT-3'], double-stranded cDNA was size selected, ligated
                     to Eco RI adapters (Pharmacia), digested with Not I and
                     cloned into the Not I and Eco RI sites of a modified pT7T3 \,
                     vector (Pharmacia). Library went through one round of
normalization to a Cot = 5. Library constructed by Bento
                     Soares and M.Fatima Bonaldo. RNA from sporadic parathyroid
                     adenomas was kindly provided by Dr. Stephen Marx, National
                     Institute of Diabetes and Digestive and Kidney Diseases,
                     NIH."
               125 a
BASE COUNT
                          88 c
                                  131 g
                                           104 t
ORIGIN
      1 cccatctctc ccccgggcct gctggttttg gcggggagaa ggagagaggg gactctggac
      61 gtgccagggt cagatetege etcegaggaa ggtgcagetg aacetggtgt tttagaggat
     121 accttggtcc cagagtcatc atgaaggccc ttgatgagcc tccctatttg acagtgggca
     181 ctgatgtgag tgctaaatac agaggagcct tttgtgaagc caagatcaag acagcaaaaa
    241 gacttgtcaa agtcaaggtg acatttagac atgattcttc aacagtggaa gttcaggatg
    301 accacataaa gggcccacta aaggtaggag ctattgtgga agtgaagaat cttgatggtg
    361 catatcagga agctgttatc aataaactag cagatgcgag ttggtacact gtagtttttg
```

421 atgacggaga tgagaagaca ctgagacg

// .